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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,516	02/12/2004	Donald J. Curry	118601	3678
27074	7590	07/05/2007		
OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER JANKUS, ALMIS R	
			ART UNIT 2628	PAPER NUMBER
			NOTIFICATION DATE 07/05/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27074@oliff.com  
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## Office Action Summary

**Application No.**

10/776,516

**Applicant(s)**

CURRY ET AL.

**Examiner**

Almis R. Jankus

**Art Unit**

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claims 1-20 are presented for examination.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choate in view of Calstleman.

With respect to claim 1 Choate teaches the claimed method for generating edge continuity pixel data, comprising: identifying a pixel as an edge pixel based on a maximum luminance value and a minimum luminance value of a first neighborhood of the pixel; and setting a polarity value of the edge pixel based on a dot product of the maximum luminance value and associated chroma values, and the minimum luminance value and associated chroma values, at column 4 line 56 to column 5 line 40.

Castleman teaches the Sobel operators mentioned at Choate at page 465.

Claim 2 further requires the method of claim 1, further comprising: reclassifying the polarity value of the edge pixel if at least one pixel in a second neighborhood of the edge pixel does not have a same polarity value. Choate teaches this at column 2 line 5 to column 3 line 43.

Claim 3 further requires the method of claim 1, further comprising: reclassifying a non-edge pixel as an edge pixel with a polarity value if all pixels in a second neighborhood of the non-edge pixel have polarity values. Choate teaches this at column 2 line 5 to column 3 line 43.

Claim 4 further requires the method of claim 1, further comprising: assigning the maximum luminance value and associated chroma values of the edge pixel as values of

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a corresponding pixel in an enhanced image data if the edge pixel has a first polarity value; assigning the minimum luminance value and associated chroma values of the edge pixel as values of the corresponding pixel in the enhanced image data if the edge pixel has a second polarity value; and assigning blurred color image values of a non-edge pixel as values of the corresponding pixel in the enhanced image data for the non-edge pixel. Choate teaches this at column 2 line 5 to column 3 line 43.

Claim 5 further requires the method of claim 1, further comprising: linearizing a sequence of consecutive maximum luminance values and minimum luminance values if the sequence of consecutive maximum luminance values and minimum luminance values are non-linear prior to performing the dot product. Calstleman teaches this at page 466 as edge linking.

Claim 7 further requires the apparatus of claim 6, further comprising: an edge detector that detects that the pixel is an edge pixel based on the maximum luminance value and the minimum luminance value generated by the minimum-maximum generator. Choate teaches this at column 4 line 56 to column 5 line 40.

Claim 8 further requires the apparatus of claim 7, further comprising: a classifier that classifies the edge pixel based the polarity value generated by the dot product multiplier for the edge pixel. Choate teaches this at column 4 line 56 to column 5 line 40.

Claim 9 further requires the apparatus of claim 8, further comprising: a reclassifier that reclassifies a classified pixel if at least one pixel in a second neighborhood of the pixel does not have a same classification. Choate teaches this at column 2 line 5 to column 3 line 43.

Claim 12 further requires the xerographic marking device incorporating the apparatus of claim 6. Castleman teaches this at pages 32-33.

Claim 13 further requires the marking device incorporating the apparatus of claim 6. Castleman teaches this at pages 32-33.

Claim 14 further requires the digital photocopier incorporating the apparatus of claim 6. Castleman teaches this at pages 32-33.

The remainder of the claims recite features previously rejected above. The limitations for the remaining claims are likewise rejected under similar rationale for similar respective features.


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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Almis R. Jankus whose telephone number is 571-272-7643. The examiner can normally be reached on M-F, 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJ

  
ALMIS R. JANKUS  
PRIMARY EXAMINER